

**ABSTRACT**

A method is disclosed for flatproofing a tire and wheel assembly with a flexible, lightweight foam-fill by supplying at least two polyurethane reactive materials to a static mixer. The static mixer mixes the reactants, and a nucleating gas is supplied to the mixed reactants in the static mixer to form a liquid reactant mixture with entrained gas. The reactant mixture is injected into the tire and wheel assembly where the mixture reacts and foams replacing the air in the tire with a flexible, lightweight semi-open cell foam-fill. The resulting foam-filled tire and wheel assembly is then allowed to cure.